

WHAT IS CLAIMED IS:

Sub A1
1. An ink jet recording element comprising a support having
5 thereon an image-receiving layer comprising non-silicon-containing inorganic
oxide particles, said particles having their surfaces treated with a silane coupling
agent having a hydrophilic, organic moiety.

10 2. The recording element of Claim 1 wherein said image-receiving
layer contains said particles in an amount of from about 40 to about 95% by
weight.

15 3. The recording element of Claim 1 wherein said inorganic oxide
particles are pseudo-boehmite, alumina, zirconia, titania, yttria or ceria.

20 4. The recording element of Claim 1 wherein said inorganic oxide
particles are treated with said silane coupling agent in an amount of from about
0.01 to about 0.5 mmol/gram.

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25 5. The recording element of Claim 1 wherein said silane coupling
agent is N-(trimethoxysilyl)ethylbenzyl-N,N,N-trimethylammonium chloride; N-
trimethoxysilylpropyl-N,N,N-tributylammonium chloride; octadecyldimethyl(3-
trimethoxysilylpropyl)ammonium chloride; or N-(3-triethoxysilylpropyl)-4,5-
dihydroimidazole.

6. The recording element of Claim 1 wherein said image-receiving
layer contains a polymeric binder

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30 7. The recording element of Claim 6 wherein said polymeric
binder is poly(vinyl alcohol).

8. The recording element of Claim 6 wherein said polymeric binder is present in an amount of from about 5 to about 30% by weight.

9. The recording element of Claim 1 wherein said image-receiving layer is present at a thickness of from about 1 μm to about 60 μm .

10. The recording element of Claim 1 wherein said inorganic oxide particles have a particle size of from about 5 nm to about 1,000 nm.

11. The recording element of Claim 1 wherein a base layer is present in between said support and said image-receiving layer.

12. The recording element of Claim 11 wherein said base layer comprises inorganic particles and a polymeric binder.

13. The recording element of Claim 12 wherein said inorganic particles are calcium carbonate, calcined clay, aluminosilicates, zeolites or barium sulfate.

14. The recording element of Claim 12 wherein said polymeric binder is a styrene/acrylic latex, styrene/butadiene latex or poly(vinyl alcohol).

Sub A2